

(1) GENERAL INFORMATION:

PLICANT:
(A) NAME: GENSCI REGENERATION SCIENCES INC.
(B) STREET: 201 - 5090 Explorer Drive
(C) CITY: Mississauga
(D) PROVINCE: Ontario
(E) COUNTRY: CA
(F) POSTAL CODE (ZIP) : L4W 4T9

(A) NAME: TAM, Cherk Shing
(B) STREET: 1072 Rectory Lane
(C) CITY: Oakville
(D) PROVINCE: Ontario
(E) COUNTRY: CA
(F) POSTAL CODE (ZIP) : L6M 2B7

(ii) TITLE OF INVENTION: BONE STIMULATING FACTOR

(iii) NUMBER OF SEQUENCES: 62

(iv) COMPUTER READABLE FORM:

COMPUTER READABLE FORM:
(A) MEDIUM TYPE: Diskette, 3 1/2 inch, 1.4 Mb storage
(B) COMPUTER: COMPAQ, IBM PC compatible
(C) OPERATING SYSTEM: MS-DOS 5.1
(D) SOFTWARE: WORD PERFECT

(v) CURRENT APPLICATION DATA:
APPLICATION NUMBER:

(vi) PRIOR APPLICATION DATA:
(A) APPLICATION NUMBER: US 08/763,458
(B) FILING DATE: 11-DEC-1996

(2) INFORMATION FOR SEQ ID NO:1

(i) SEQUENCE CHARACTERISTICS:

SEQUENCE CHARACTERISTICS

- (A) LENGTH: 36 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(xi) ~~SEQUENCE DESCRIPTION:~~ SEQ ID NO:1

Gly Ile Gly Lys Arg Thr Asn Glu His Thr Ala Asp Cys Lys Ile Lys
1 5 10 15
Pro Asn Thr Leu His Lys Lys Ala Ala Glu Thr Leu Met Val Leu Asp
20 25 30
Gln Asn Gln Pro
35

(2) INFORMATION FOR SEQ ID NO:2

(i) SEQUENCE CHARACTERISTICS:

SEQUENCE CHARACTERISTICS

- (A) LENGTH: 36 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

FEATURE:
(A) NAME/KEY: Modified site

(B) LOCATION: . . . 2

(B) LOCATION: ...2
(D) OTHER INFORMATION: /note= "Xaa is N-acetyl glycine"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:2

(xi) SEQUENCE DATA

Xaa	Ile	Gly	Lys	Arg	Thr	Asn	Glu	His	Thr	Ala	Asp	Cys	Lys	Ile	Lys
1				5					10					15	

Pro Asn Thr Leu His Lys Lys Ala Ala Glu Thr Leu Met Val Leu Asp
20 25 30

Gln Asn Gln Pro
35

(2) INFORMATION FOR SEQ ID NO:3

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 36 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:3

(x1) SEQUENCE 11

Gly Ile Gly Lys Arg Thr Asn Glu His Thr Ala Asp Ala Lys Ile Lys
1 5 10 15

Pro Asn Thr Leu His Lys Lys Ala Ala Glu Thr Leu Met Val Leu Asp
20 25 30

Gln Asn Gln Pro
35

(2) INFORMATION FOR SEQ ID NO:4

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 30 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4

Gly Ile Gly Lys Arg Thr Asn Glu His Thr Ala Asp Cys Lys Ile Lys
1 5 10 15

Pro Asn Thr Leu His Lys Lys Ala Ala Glu Thr Leu Met Val
20 25 30

(2) INFORMATION FOR SEQ ID NO:5

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 25 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION

Gly Ile Gly Lys Arg Thr Asn Glu His Thr Ala Asp Cys Lys Ile Lys
1 5 10 15

(2) INFORMATION FOR SEQ ID NO:6
(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION

Gly	Ile	Gly	Lys	Arg	Thr	Asn	Glu	His	Thr	Ala	Asp	Cys	Lys	Ile	Lys
1				5					10					15	

(2) INFORMATION FOR SEQ ID NO:7
 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 15 amino acids
 (B) TYPE: amino acid
 (D) TOPOLOGY: linear

(xi) SEQUENCE 11

Gly Ile Gly Lys Arg Thr Asn Glu His Thr Ala Asp Cys Lys Ile
1 5 10 15

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:8

(2) INFORMATION FOR SEQ ID NO:9
 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 10 amino acids
 (B) TYPE: amino acid
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:9

Arg Thr Asn Glu His Thr Ala Asp Cys Lys
1 5 10

- (2) INFORMATION FOR SEQ ID NO:10
(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 16 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:10

(xi) SEQUENCE DESCRIPTION

Leu His Lys Lys Ala Ala Glu Thr Leu Met Val Leu Asp Gln Asn Gln
1 5 10 15

- (2) INFORMATION FOR SEQ ID NO:11
(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 15 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:11

Leu His Lys Lys Ala Ala Glu Thr Leu Met Val Leu Asp Gln Asn
1 5 10 15

- (2) INFORMATION FOR SEQ ID NO:12
(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 14 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:12

Leu His Lys Lys Ala Ala Glu Thr Leu Met Val Leu Asp Gln
1 5 10

- (2) INFORMATION FOR SEQ ID NO:13
 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 13 amino acids
 (B) TYPE: amino acid
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:13

Leu His Lys Lys Ala Ala Glu Thr Leu Met Val Leu Asp
1 5 10

- (2) INFORMATION FOR SEQ ID NO:14
(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 23 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:14

Thr Ala Asp Cys Lys Ile Lys Pro Asn Thr Leu His Lys Lys Ala Ala
1 5 10 15

Glu Thr Leu Met Val Leu Asp
20

- (2) INFORMATION FOR SEQ ID NO:15
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 30 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:15

Arg Thr Asn Glu His Thr Ala Asp Cys Lys Ile Lys Pro Asn Thr Leu
1 5 10 15

His Lys Lys Ala Ala Glu Thr Leu Met Val Leu Asp Gln Asn
20 25 30

- (2) INFORMATION FOR SEQ ID NO:16
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 11 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:16

Arg Thr Asn Glu His Thr Ala Asp Cys Lys Ile
1 5 10

- (2) INFORMATION FOR SEQ ID NO:17
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 90 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:17

GGG ATC GGA AAA CGA ACA AAT GAA CAT ACG GCA GAT TGT AAA ATT AAA
Gly Ile Gly Lys Arg Thr Asn Glu His Thr Ala Asp Cys Lys Ile Lys
1 5 10 15

48

CCG AAC ACC TTG CAT AAA AAA GCT GCA GAG ACT TTA ATG GTC
Pro Asn Thr Leu His Lys Lys Ala Ala Glu Thr Leu Met Val

90

0022334400229

20

25

30

(2) INFORMATION FOR SEQ ID NO:18

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 75 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:18

GGG ATC GGA AAA CGA ACA AAT GAA CAT ACG GCA GAT TGT AAA ATT AAA 48
 Gly Ile Gly Lys Arg Thr Asn Glu His Thr Ala Asp Cys Lys Ile Lys
 1 5 10 15

CCG AAC ACC TTG CAT AAA AAA GCT GCA 75
 Pro Asn Thr Leu His Lys Lys Ala Ala
 20 25

(2) INFORMATION FOR SEQ ID NO:19

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 60 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:19

GGG ATC GGA AAA CGA ACA AAT GAA CAT ACG GCA GAT TGT AAA ATT AAA 48
 Gly Ile Gly Lys Arg Thr Asn Glu His Thr Ala Asp Cys Lys Ile Lys
 1 5 10 15

CCG AAC ACC TTG 60
 Pro Asn Thr Leu
 20

(2) INFORMATION FOR SEQ ID NO:20

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 45 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:20

GGG ATC GGA AAA CGA ACA AAT GAA CAT ACG GCA GAT TGT AAA ATT 45
 Gly Ile Gly Lys Arg Thr Asn Glu His Thr Ala Asp Cys Lys Ile
 1 5 10 15

(2) INFORMATION FOR SEQ ID NO:21

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 42 base pairs

002234-06090

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:21

42

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:22

30

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:23

48

96

108

```
(ix) FEATURE:
      (A) NAME/KEY: Modified site
      (B) LOCATION: ...2
```

(D) OTHER INFORMATION: /note= "Xaa is N-acetyl arginine"

(ix) FEATURE:

(A) NAME/KEY: Modified site

(B) LOCATION: 9...

(D) OTHER INFORMATION: /note= "Xaa is lysinamide"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:24

Xaa Thr Asn Glu His Thr Ala Asp Cys Xaa
1 5 10

(2) INFORMATION FOR SEQ ID NO:25

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 10 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ix) FEATURE:

(A) NAME/KEY: Modified site

(B) LOCATION: ...2

(D) OTHER INFORMATION: /note= "Xaa is N-acetyl arginine"

(ix) FEATURE:

(A) NAME/KEY: Modified site

(B) LOCATION: 9...

(D) OTHER INFORMATION: /note= "Xaa is lysinamide"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:25

Xaa Thr Asn Glu His Thr Ala Glu Cys Xaa
1 5 10

(2) INFORMATION FOR SEQ ID NO:26

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 10 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ix) FEATURE:

(A) NAME/KEY: Modified site

(B) LOCATION: ...2

(D) OTHER INFORMATION: /note= "Xaa is N-acetyl arginine"

(ix) FEATURE:

(A) NAME/KEY: Modified site

(B) LOCATION: 9...

(D) OTHER INFORMATION: /note= "Xaa is lysinamide"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:26

Xaa Thr Gln Glu His Thr Ala Glu Cys Xaa
1 5 10

0032384-060299

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

```

FEATURE:
(A) NAME/KEY: Modified site
(B) LOCATION: ...2
(D) OTHER INFORMATION: /note= "Xaa is N-acetyl arginine"

```

FEATURE:
(A) NAME/KEY: Modified site
(B) LOCATION: 9...
(D) OTHER INFORMATION: /note= "Xaa is lysinamide"

Xaa Thr Gln Glu His Thr Ala Asp Cys Xaa
1 5 10

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

Arg Thr Asn Glu His Thr Ala Glu Cys Lys
1 5 10

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

Arg Thr Gln Glu His Thr Ala Glu Cys Lys
1 5 10

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:30

Arg Thr Gln Glu His Thr Ala Asp Cys Lys
1 5 10

- (2) INFORMATION FOR SEQ ID NO:31
(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 30 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:31

30

CGA ACA AAT GAA CAT ACG GCA GAA TGT AAA
Arg Thr Asn Glu His Thr Ala Glu Cys Lys
1 5 10

- (2) INFORMATION FOR SEQ ID NO:32
(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 30 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:32

CGA ACA CAA GAA CAT ACG GCA GAA TGT AAA 30
Arg Thr Gln Glu His Thr Ala Glu Cys Lys
1 5 10

- (2) INFORMATION FOR SEQ ID NO:33
(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 30 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:33

30

CGA ACA CAA GAA CAT ACG GCA GAT TGT AAA
Arg Thr Gln Glu His Thr Ala Asp Cys Lys
1 5 10

- (2) INFORMATION FOR SEQ ID NO:34
(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

- (ix) FEATURE:
(A) NAME/KEY: Modified site
(B) LOCATION: ...2
(D) OTHER INFORMATION: /note= "Xaa is N-acetyl alanine"

0922090-4582260

FEATURE:
(A) NAME/KEY: Modified site

(B) LOCATION: 9...

(B) LOCATION: 9...
(D) OTHER INFORMATION: /note= "Xaa is lysinamide"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:34

Xaa Thr Asn Glu His Thr Ala Asp Cys Xaa
1 5 10

1 5
(2) INFORMATION FOR SEQ ID NO:35

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 10 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

FEATURE:
(A) NAME/KEY: Modified site

(B) LOCATION: ...2

(B) LOCATION: ...2
(D) OTHER INFORMATION: /note= "Xaa is N-acetyl arginine"

FEATURE:
(A) NAME/KEY: Modified site

(B) LOCATION: 9...

(B) LOCATION: 9...

(D) OTHER INFORMATION: /note= "Xaa is lysinamide"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:35

Xaa Thr Gln Ala His Thr Ala Asp Cys Xaa
1 5 10

(2) INFORMATION FOR SEQ ID NO:36

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 10 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

FEATURE:
(A) NAME/KEY: Modified site

(B) LOCATION: ...2

```
(B) LOCATION: ...2
(D) OTHER INFORMATION: /note= "Xaa is N-acetyl arginine"
```

FEATURE:
(A) NAME/KEY: Modified site

(B) LOCATION: 9...

(B) LOCATION: 9...

(D) OTHER INFORMATION: /note= "Xaa is lysinamide"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:36

Xaa Thr Asn Glu Ala Thr Ala Asp Cys Xaa
1 5 10

(2) INFORMATION FOR SEQ ID NO:37

(i) SEQUENCE CHARACTERISTICS:

```
(ix) FEATURE:
      (A) NAME/KEY: Modified site
      (B) LOCATION: ...2
      (D) OTHER INFORMATION: /note= "Xaa is N-acetyl arginine"
```

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:37

(2) INFORMATION FOR SEQ ID NO:38
(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

```
(ix) FEATURE:
(A) NAME/KEY: Modified site
(B) LOCATION: 9...
(D) OTHER INFORMATION: /note= "Xaa is alaninamide"
```

Xaa Thr Asn Glu His Thr Ala Asp Cys Xaa
1 5 10

```
(ix) FEATURE:
      (A) NAME/KEY: Modified site
      (B) LOCATION: ...2
      (D) OTHER INFORMATION: /note= "Xaa is N-acetyl arginine"
```

```
(ix) FEATURE:
      (A) NAME/KEY: Modified site
      (B) LOCATION: 9...
      (D) OTHER INFORMATION: /note= "Xaa is lysinamide"
```

Xaa Ala Asn Glu His Thr Ala Asp Cys Xaa
1 5 10

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:40

Xaa Thr Ala Glu His Thr Ala Asp Cys Xaa
1 5 10

- (2) INFORMATION FOR SEQ ID NO:41
- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 10 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear
 - (ix) FEATURE:
 - (A) NAME/KEY: Modified site
 - (B) LOCATION: ...2
 - (D) OTHER INFORMATION: /note= "Xaa is N-acetyl arginine"
 - (ix) FEATURE:
 - (A) NAME/KEY: Modified site
 - (B) LOCATION: 9...
 - (D) OTHER INFORMATION: /note= "Xaa is lysinamide"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:41

Xaa Thr Asn Glu His Ala Ala Asp Cys Xaa
1 5 10

- (2) INFORMATION FOR SEQ ID NO:42
 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 10 amino acids
 (B) TYPE: amino acid
 (D) TOPOLOGY: linear

FEATURE:
(A) NAME/KEY: Modified site

(A) NAME/REF: ...
(B) LOCATION: ...2

(A) NAME/KEY: MOD-1100
(B) LOCATION: ...2
(D) OTHER INFORMATION: /note= "Xaa is N-acetyl arginine"

FEATURE:
(A) NAME/KEY: Modified site

(B) LOCATION: 9...

(A) NAME/REF ID: ...
(B) LOCATION: 9...
(D) OTHER INFORMATION: /note= "Xaa is lysinamide"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:42

Xaa Thr Asn Glu His Thr Gly Asp Cys Xaa
1 5 10

(2) INFORMATION FOR SEQ ID NO:43
SEQUENCE CHARACTERISTIC

INFORMATION FOR SEQ ID NO:15
(i) SEQUENCE CHARACTERISTICS:

SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

FEATURE:
(A) NAME/KEY: Modified site

(A) NAME/REF: ...
(B) LOCATION: ...2

(A) NAME/REF: MOG11111
(B) LOCATION: ...2
(D) OTHER INFORMATION: /note= "Xaa is N-acetyl arginine"

FEATURE:
(A) NAME/KEY: Modified site

(A) NAME/REF: 11-11-11
(B) LOCATION: 9...

(A) NAME/REF: 1000
(B) LOCATION: 9...
(D) OTHER INFORMATION: /note= "Xaa is lysinamide"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:43

Xaa Thr Asn Glu His Thr Ala Asp Tyr Xaa
1 5 10

(2) INFORMATION FOR SEQ ID NO:44
SEQUENCE CHARACTERISTIC

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 10 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

FEATURE:
(A) NAME/KEY: Modified site

(A) NAME/REF: ...
(B) LOCATION: ...2

(A) NAME/REF: MODIFICATION
(B) LOCATION: ...2
(D) OTHER INFORMATION: /note= "Xaa is N-acetyl arginine"

FEATURE:
(A) NAME/KEY: Modified site

(B) LOCATION: 9...

(A) NAME/REF: NAME
(B) LOCATION: 9...
(D) OTHER INFORMATION: /note= "Xaa is lysinamide"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:44

Xaa Thr Gln Glu His Thr Ala Glu Ala Xaa
1 5 10

(2) INFORMATION FOR SEQ ID NO:45

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ix) FEATURE:

- (A) NAME/KEY: Modified site
(B) LOCATION: ...2
(D) OTHER INFORMATION: /note= "Xaa is N-acetyl arginine"

(ix) FEATURE:

- (A) NAME/KEY: Modified site
(B) LOCATION: 9...
(D) OTHER INFORMATION: /note= "Xaa is lysinamide"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:45

Xaa Thr Gln Glu His Thr Ala Glu Tyr Xaa
1 5 10

(2) INFORMATION FOR SEQ ID NO:46

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ix) FEATURE:

- (A) NAME/KEY: Modified site
(B) LOCATION: ...2
(D) OTHER INFORMATION: /note= "Xaa is N-acetyl arginine"

(ix) FEATURE:

- (A) NAME/KEY: Modified site
(B) LOCATION: 9...
(D) OTHER INFORMATION: /note= "Xaa is lysinamide"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:46

Xaa Thr Gln Glu His Thr Ala Glu Ser Xaa
1 5 10

(2) INFORMATION FOR SEQ ID NO:47

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:47

662290-43322260

Arg Ala Asn Glu His Thr Ala Asp Cys Lys
1 5 10

- (2) INFORMATION FOR SEQ ID NO:48
 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 10 amino acids
 (B) TYPE: amino acid
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:48

Arg Thr Ala Glu His Thr Ala Asp Cys Lys
1 5 10

- (2) INFORMATION FOR SEQ ID NO:49
 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 10 amino acids
 (B) TYPE: amino acid
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:49

Arg Thr Asn Glu His Ala Ala Asp Cys Lys
1 5 10

- (2) INFORMATION FOR SEQ ID NO:50
 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 10 amino acids
 (B) TYPE: amino acid
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:50

Arg Thr Asn Glu His Thr Gly Asp Cys Lys
1 5 10

- (2) INFORMATION FOR SEQ ID NO:51
 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 10 amino acids
 (B) TYPE: amino acid
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:51

Arg Thr Asn Glu His Thr Ala Asp Tyr Lys
1 5 10

- (2) INFORMATION FOR SEQ ID NO:52
(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10 amino acids

- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:52

Arg Thr Gln Glu His Thr Ala Glu Ala Lys
1 5 10

- (2) INFORMATION FOR SEQ ID NO:53
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 10 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:53
Arg Thr Gln Glu His Thr Ala Glu Tyr Lys
1 5 10

- (2) INFORMATION FOR SEQ ID NO:54
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 10 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:54

Arg Thr Gln Glu His Thr Ala Glu Ser Lys
1 5 10

- (2) INFORMATION FOR SEQ ID NO:55
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 30 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:55

CGA GCA AAT GAA CAT ACG GCA GAT TGT AAA
Arg Ala Asn Glu His Thr Ala Asp Cys Lys
1 5 10

30

- (2) INFORMATION FOR SEQ ID NO:56
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 30 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:56

30

CGA ACA GCA GAA CAT ACG GCA GAT TGT AAA
Arg Thr Ala Glu His Thr Ala Asp Cys Lys
1 5 10

- (2) INFORMATION FOR SEQ ID NO:57
(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 30 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:57

30

CGA ACA AAT GAA CAT GCA GCA GAT TGT AAA
Arg Thr Asn Glu His Ala Ala Asp Cys Lys
1 5 10

- (2) INFORMATION FOR SEQ ID NO:58
(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 30 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:58

30

CGA ACA AAT GAA CAT ACA GGG GAT TGT AAA
Arg Thr Asn Glu His Thr Gly Asp Cys Lys
1 5 10

- (2) INFORMATION FOR SEQ ID NO:59
(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 30 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:59

30

CGA ACA AAT GAA CAT ACA GCA GAT TAT AAA
Arg Thr Asn Glu His Thr Ala Asp Tyr Lys
1 5 10

- (2) INFORMATION FOR SEQ ID NO:60
(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 30 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:60

0032354-060290

CGA ACA CAA GAA CAT ACA GCA GAA GCA AAA
Arg Thr Gln Glu His Thr Ala Glu Ala Lys
1 5 10

30

- (2) INFORMATION FOR SEQ ID NO:61
(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 30 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:61

CGA ACA CAA GAA CAT ACA GCA GAA TAT AAA
Arg Thr Gln Glu His Thr Ala Glu Tyr Lys
1 5 10

30

- (2) INFORMATION FOR SEQ ID NO:62
(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 30 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:62

CGA ACA CAA GAA CAT ACA GCA GAA TCT AAA
Arg Thr Gln Glu His Thr Ala Glu Ser Lys
1 5 10

30

662030-15322650